Herbarium and pickled material have been prepared bearing the following collection data: —
Viburnum recognitum Fern. Roadside thicket, East Sandwich, Barnstable County, Mass., 12 Sept. 1967, *Eaton 6079*, margin of Hoxie Pond, E. Sandwich, 12 Sept. 1967, *Eaton 6083*.

Viburnum dentatum L. (same as *6079*), *Eaton 6080*; (same as *6083*), *Eaton 6082*.

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A RANGE EXTENSION FOR HUDSONIA ERICOIDES IN THE SOUTHEASTERN UNITED STATES. The following note contains new distributional data for *Hudsonia ericoides* L., Golden-Heather. *Hudsonia ericoides* was reported by Small (1933) as occurring from North Carolina to Nova Scotia. Fernald (1950) indicated a similar distribution, but stated that the North Carolina record needed verification. Brizicky (1964) also noted that this report was dubious. Due to the absence of herbarium material to substantiate the previous reports this species was excluded by Radford, *et al* (1964) from the Carolinas' Flora.

On May 5, 1967, the authors found *Hudsonia ericoides* L. growing on a low sand hammock, east of Juniper Creek near U.S. highway 1, Chesterfield County, *South Carolina*. This collection established the occurrence of *H. ericoides* in the Carolinas' Flora and also establishes a new record for the state of *South Carolina*. Several hundred plants were noted during a subsequent search of the area on May 25.

The population of *Hudsonia ericoides* L. occupies an area approximately 300 yds. in length and 75 yds. in width.

Sand from the well leached white sand hammock has been removed for construction purposes leaving pits scattered throughout. These excavations range to 10 ft. in diameter and 2-3 feet in depth, which approximates the water table. *Hudsonia* is most abundant around the rims of some of these excavations. In other excavations the bottom is wet enough to provide a suitable habitat for a number of pine-savannah species.

Several species of interest were found associated with the above population of *Hudsonia ericoides* L. The dominant ground cover consisted of *Cladonia* spp., *Selaginella arenicola* ssp. *acanthonota* (Underw.) Tryon, *Tradescantia rosea* var. *græminea* (Small) Anderson, *Polygonella polygama* (Vent.) Engelm. & Gray, *Arenaria caroliniana* Walt., *Stipulicida setacea* Michx., and *Solidago pauciflosculosa* Michx. The dominant trees were *Pinus palustris* Miller, *Quercus laevis* Walt., *Q. incana* Bartram, and *Q. margaretta* Ashe. All of the above species characterize xeric sites in the Carolina Fall-line sandhills (Wells and Shunk, 1931; Duke, 1961) and follow a definite distributional pattern through this area (Radford, *et al*, 1965).

Certain species of more mesic tolerances were also found growing on the hammock: *Pinus serotina* Michx., *Magnolia virginiana* L., *Leiophyllum buxifolium* (Bergius) Ell., *Vaccinium crassifolium* Andr., *Ilex glabra* (L.) Gray, *I. coriacea* (Pursh) Chapm., *Cyrilla racemiflora* L. and *Clethra alnifolia* L. The occurrence of the above species here is indicative of a high water table. *Leiophyllum buxifolium* was observed to be very abundant here and at other similar but scattered localities in the Coastal Plain.

This association with *Leiophyllum buxifolium* (Bergius) Ell. is of particular phytogeographical interest since there are parallels in the infra-specific or specific distribution (depending on interpretation of present information) of *Leiophyllum* and *Hudsonia*. *Leiophyllum buxifolium*, treated as a single species by Radford, *et al* (1964-1965), has two varieties in the Carolinas (Wood, 1961). A disjunct var. *prostratum* (Louden) Gray is restricted to the Smoky

and Blue Ridge Mountains, while a closely related var. *Hugeri* Schneider occurs both in the Coastal Plain and Mountains with two stations between. *Hudsonia montana* Nutt., endemic to the mountains of North Carolina, exhibits a similar disjunct pattern with *H. ericoides*. It is interesting to speculate as to whether or not these patterns were formed simultaneously by the same or similar factors. Several other species, such as *Kalmia angustifolia* var. *caroliniana* (Small) Fern., *Gaylussacia dumosa* (Andrz.) T. & G., *Vaccinium corymbosum* L., *Hypericum canadense* L., and *H. densiflorum* Pursh, would be important in the determination of these factors, since they show similar distributional patterns (Radford, et al, 1965).

Assuming an affinity for the same ecological requirements or niche, several unsuccessful searches for additional populations of *Hudsonia ericoides* L. have been made of known *Leiophyllum* localities in the Coastal Plain of the Carolinas. The possibility of *Hudsonia ericoides* having been planted in South Carolina seems remote, and even so, the species appears to be well established. Specimens are being distributed to major herbaria (Bozeman and Logue 9126, 9176).

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TWO NATURALLY OCCURRING ABNORMALITIES OF THE DIATOM PODOCYSTIS ADRIATICA.[1] [2]

While frustular aberrations of diatoms are common in cultures (2, 5), they are uncommonly observed in natural samples. This paper describes two abnormal forms of the epiphytic diatom *Podocystis adriatica* (Kütz.) Ralfs.

During a routine examination of Rhode Island marine algae for epiphytic diatoms, a fertile female specimen of *Grinnellia americana* (C.Ag.) Harv. was observed to harbor several scattered brown clusters of diatoms. After oxidation of the material with nitric acid, washing with distilled water, and mounting in Hyrax, the diatoms proved to be exclusively *Podocystis adriatica*. Among the several normal cells were occasional occurrences of the abnormality shown in fig. 1-A and one specimen of the abnormality in fig. 1-B (normal frustules are shown in fig. 1-C, D, E). These aberrations correspond to the "marginal" and "surface-pattern" abnormalities described by Conger (1).

The cause of marginal deformities (fig. 1-A) has been attributed to crowding of the cells (2) and to sudden chemical environmental changes (1). The surface-pattern deformity (fig. 1-B), in this case being expressed as an anastomosing and poorly defined pseudoraphe in the upper portion of the frustule, is believed to be a result of disturbance in the formative stages (1). A surface abnormality involving the raphe canal in *Surirella*, was induced by continuous light exposure (2). These abnormalities were thought to occur during auxospore formation (3) but Conger (1) contends that most of them are initiated during the vegetative phase.

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